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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,592	07/11/2001	William Holm	0104-0354P	7653

2292 7590 11/23/2004

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EXAMINER

FULLER, ERIC B

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/901,592

Applicant(s)

HOLM ET AL.

Examiner

Eric B Fuller

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 19, 20, 31, 34 and 37-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 19, 20, 31, 34 and 37-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7, 8, 19, 20, 31, 34, and 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. (US 6,100,787) in view of Marumoto et al. (US 6,692,095) and Ciardella et al. (US 5,711,989).

Huang teaches that it is known that screen printing viscous pastes often leads to uneven coatings (column 1, lines 10-31). The reference fails to explicitly teach smoothing these coatings. However, Marumoto teaches that jetting processes have the ability to correct uneven coatings (column 3, lines 1-50). It is unclear from the reference if a jetting process would have the precision capable for correcting the errors resulting from screen printing processes. For this, the examiner supplies Ciardella for disclosing a nozzle jetting apparatus for jetting a viscous material. The drops are precisely sized and placed in specific locations (column 5, line 25 - column 6, line 64). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include jetting means in the screen printing method taught by Huang. By doing so, one would reap the benefits of precisely sizing and placing drops in the uneven areas of coating of Huang such that a smooth coating is produced.

As to claim 2, the references fail to explicitly teach further determining errors after the jetting step and correcting them if they exist. However, since the references are concerned with achieving a certain level of uniformity, it is the position of the examiner that it would have been obvious at the time the invention was made to a person having ordinary skill in the art to determine if the uniformity of the coating was sufficient and if it was not, to repeat the smoothing step. By doing so, one would reap the benefit of achieving the desired uniformity.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. (US 6,100,787) in view of Marumoto et al. (US 6,692,095) and Ciardella et al. (US 5,711,989), as applied to claims 2 or 3 above, and further in view of Itsuji (US 5,151,299).

Huang, in view of Ciardella, teaches the limitations of claims 2 and 3, but fails to teach the correcting step comprises removing some of the material. However, Itsuji teaches that screen printing often results in the deposited material being blurred at the edges (column 1, lines 25-33). This is corrected by removing some of the material such that the edges are more defined (column 1, lines 44-63). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to remove some of the coating in Huang, in view of Ciardella, such that the edges of the deposited material are better defined and not blurred.

Response to Arguments

Applicant argues that Ciradella fails to teach that the jetting process may be used to correct errors and form a smooth coating, thus the rejection of Huang in view of Ciardella is improper. This argument has been found convincing and the corresponding rejections have been withdrawn. In the current Office Action, Marumoto makes up for these deficiencies by teaching that jetting may be used to correct uneven coatings, thus forming an even coating. Applicant's arguments are moot in view of the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B Fuller whose telephone number is (571) 272-1420. The examiner can normally be reached on Mondays through Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck, can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to be 'EBF', with a long horizontal flourish extending to the right.

EBF

A handwritten signature in black ink, appearing to be 'Shrive P. Beck', written in a cursive style.

SHRIVE P. BECK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700